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ABSTRACT

The objective of this research was to determine the feasibility of developing a functionally oriented General Educational Development (GED) program. To obtain information about problems of adaptation common to undereducated men, and to obtain information about knowledges and skills such men may not have, an achievement test/attitude questionnaire was administered to a large group of enlisted men. The instrument was designed to assess men's attitudes and skills with respect to financial, health, insurance, legal, and interpersonal problems. Men who took the test ranged in education level from less than 8 years to over 16 years. Higher educated men performed significantly better on the achievement test than did lower educated men, but high school dropouts (education level 9-11 years) consistently scored lowest of all. When attitude scale items were categorized as reflecting good vs. poor attitudes, poor attitudes decreased as education level rose. The results showed a strong correlation between errors on the achievement test and percentage of poor attitudes. (Author)

Technical
Report
72-29
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HumRRO

Relationship of Education Level to Capabilities and Attitudes of Young Enlisted Men

William H. Melching, David Orme-Johnson,
Paul G. Whitmore, and William J. Given

HUMAN RESOURCES RESEARCH ORGANIZATION
300 North Washington Street • Alexandria, Virginia 22314

Approved for public release; distribution unlimited.

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The Human Resources Research Organization (HumRRO) is a nonprofit corporation established in 1969 to conduct research in the field of training and education. It is a continuation of The George Washington University Human Resources Research Office. HumRRO's general purpose is to improve human performance, particularly in organizational settings, through behavioral and social science research, development, and consultation. HumRRO's mission in work performed under contract with the Department of the Army is to conduct research in the fields of training, motivation, and leadership.

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

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FOREWORD

This report describes the results of research undertaken by the Human Resources Research Organization as part of Exploratory Research 83. The objective of ER-83 was to determine the feasibility of developing a functionally oriented General Educational Development (GED) Program for the Army. The research effort described in this report was undertaken to obtain information that will facilitate the attainment of the overall research objective.

The research was conducted at HumRRO Division No. 5, Fort Bliss, Texas, where Dr. Albert L. Kubala is Director. Military support was provided by the U.S. Army Air Defense Human Research Unit, of which LTC Frank R. Husted is the military chief.

Dr. William H. Melching and Dr. Paul G. Whitmore participated jointly in the planning and conduct of the research, and Dr. David Orme-Johnson assisted in the analysis of the data and preparation of the report. Sp5 William J. Given of the Air Defense Human Research Unit also assisted in the conduct of the research and in the analysis of the data.

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Meredith P. Crawford
President
Human Resources Research Organization

SUMMARY AND CONCLUSIONS

MILITARY PROBLEM

The adoption of new admission standards for the Army has led to an increase in the proportion of enlisted men who do not meet the minimally desirable education level of high school or its equivalent. A relatively high proportion of these men are believed to prefer a military career, but their full potential cannot be realized unless they are provided supplementary educational experiences. Educational programs for these men should provide immediate and continuing benefits in the performance of their military duties and in the management of their personal affairs.

RESEARCH OBJECTIVE

The objective of this research was to determine the feasibility of developing a functionally oriented General Educational Development (GED) program. As a first step, it was necessary to acquire basic information about the capabilities, skills, and attitudes currently possessed by undereducated men.

RESEARCH APPROACH

To obtain information about possible problems unique to undereducated men, and to obtain information about possible lack of capabilities in such men, a special Achievement Test/Attitude Questionnaire was devised and administered to a sample of enlisted men. The instrument was used to assess both attitudes and skills men possessed for coping with financial, health, insurance, legal, and interpersonal problems.

The subjects were 770 men of the 1st AIT Brigade (Air Defense) Fort Bliss, most of whom were in their first term of enlistment. Men who took the test ranged in education level from less than 8 years to over 16 years.

RESULTS

With respect to the Achievement Test, men at higher-education levels performed significantly better than men with less education. Scores for groups ranged from 71% to 85%. High school dropouts (education level 9-11 years) consistently scored lower than all other levels, including men whose education level was eight years or less. While some items revealed sizable differences in scores as a function of formal education level, the overall differences between best and worst group performance was relatively small (about 13%).

When Attitude Scale items were categorized according to whether they reflected "good" vs. "poor" attitudes in men, the percentage of poor attitudes decreased with education level. Correspondingly, the percentage of good attitudes increased with higher education level.

The results showed a strong correlation between errors on the Achievement Test and percentage of poor attitudes. The only exception was the grade school group (education level 0-8), which made fewer errors on the Achievement Test than the high school dropout group (education level 9-11) and had a lower percentage of poor attitudes.

CONCLUSION

The rather consistent tendency for level of achievement in practical knowledge and percentage of good attitudes to increase with education level suggests that undereducated men would be likely to benefit most from a functionally oriented GED program. However, since the difference between best and worst performance was small, it seems apparent that the practical knowledge covered by the questionnaire has not been systematically taught in primary and secondary education institutions. For that reason, a GED program directed at all education levels would seem to be defensible.

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Relationship of Education Level to Capabilities and Attitudes of Young Enlisted Men

INTRODUCTION

MILITARY PROBLEM

The adoption of new and lower admission standards for the Army has increased the proportion of enlisted men who do not meet the minimally desirable educational standards (12th grade or equivalent for enlisted men). While a relatively high proportion of these men may prefer a military career, it is acknowledged that their full potential cannot be realized unless they are provided supplementary educational experiences. Educational programs for these men should provide immediate and continuing benefits in the performance of their military duties and in the management of their personal affairs.

RESEARCH PROBLEM

The objective of this research was to determine the feasibility of developing a functionally oriented General Educational Development (GED) program. To consider the feasibility of such a program, it was deemed necessary, first, to acquire some basic information about the target population. Particular interest focused upon skills and capabilities not currently possessed by undereducated men, but which might enable them to be better "adjusted," whether in or out of the Army; kinds of problems (legal, financial, interpersonal, social, etc.) commonly faced by such men; plus other deficiencies in practical knowledge. With information on the extent and nature of such deficiencies, a more effective (i.e., more functional) GED program could be constructed.

METHOD

APPROACH

A number of meetings were held with GED personnel at the Education Center, Fort Bliss, Texas to obtain pertinent and timely information about the Army's existing GED program. Visits were also made to the Office of the Staff Judge Advocate, Provost Marshal, Center Chaplain, and Mental Hygiene Consultation Service at Fort Bliss to obtain information about the kinds of problems experienced by undereducated men.

The research staff reviewed various documents and reports provided by these offices, but the information was incomplete and the results inconclusive. A definitive description of undereducated men was still not available.

A pilot survey conducted by the Post Education Center at Fort Bliss indicated that, as of 31 August 1970, of 9,448 enlisted men for whom records were available, 14.4% had not attained at least a 12th grade level of education. However, these men were assigned to numerous duty stations on the post and they varied widely in terms of age, rank, length of service, and so forth. Therefore, it was judged not feasible to locate and interview a representative sample of undereducated men.

In light of these difficulties, it was decided to seek information about capabilities and problems of undereducated men through the use of a specially constructed questionnaire. Accordingly, a request for a sample of 1,000 enlisted men was initiated

through the U.S. Army Defense Center, Fort Bliss. It was asked that these personnel be in their first term of enlistment and, ideally, undergoing basic or advanced individual training.

Members of the 1st AIT Brigade (Air Defense), Fort Bliss, were designated to serve as subjects. The questionnaire was administered to 770 men of the Brigade on 2 April 1971.

The questionnaire consisted of two parts, Achievement and Attitude. The Achievement Test contained 29 multiple-choice items designed to elicit information in the following areas:

(1) Handling money
(2) Insurance
(3) Legal problems
(4) Health matters
(5) Buying things

The Achievement test items, grouped in these areas, are presented in Appendix A.

In an attempt to identify common social, financial, legal, and interpersonal problems, the second part of the questionnaire was constructed as an attitude scale that sought to explore the reactions of men toward several aspects of their lives. For each of 45 statements, men were asked to indicate whether they "Agreed," "Disagreed," or were "Undecided" in their reaction. The statements explored the following areas:

(1) Relationship with supervisor
(2) Relationship with family
(3) Relationship with peers
(4) Attitude toward salesmen
(5) Attitude toward spending
(6) Attitude toward getting help
(7) Attitude toward personal health
(8) Individual responsibility

Items from the attitude portion of the questionnaire are presented in Appendix B.

To facilitate testing, the two parts were combined into a single instrument, and subsequently referred to as a "questionnaire." With respect to administration of the questionnaire, one restriction was imposed: Only first-term men were to be tested. It was believed that men in this category more closely represented the kinds of individuals most likely to benefit from a functionally oriented educational program.

TESTING PROCEDURE

Testing was scheduled in three separate sessions, all on the same day. The numbers of men tested at the three sessions were, 347, 213, and 210.

After each group entered the testing room, a staff member explained briefly the purpose of the questionnaire and then reviewed with the men the specific instructions for completing it. Prior to beginning the questionnaire, the men were asked to give their rank and months in service on the answer sheet. The first three items of the achievement portion of the questionnaire asked the men to supply information on education level attained, age, and race or ethnic group.

One man answered the achievement test portion of the questionnaire by selecting more than one alternative to many items. Thus, it was necessary to discard his record, reducing the total number to 769. Also, although only first-term men had been desired, several men with over three years of military service answered the questionnaire. However, since none had a rank higher than E4, their records were not removed.

RESULTS

DESCRIPTION OF THE SAMPLE

A brief description of the men who answered the questionnaire is given in Table 1. For convenience, men were designated as belonging to one of five education levels. The table shows that 177 men were undereducated, that is, had not attained 12 years of formal schooling.

Table 1

Description of Men by Education Level

Education Level (Years)	N	Mean Number of Months in Service	Number of Men in Each Rank	Mean Age[a]
0-8	30	3.1	E1-12 E2-17 E3- 0 E4- 1	19.4
9-11	147	5.8	E1-70 E2-60 E3- 6 E4-11	19.1
12[b]	361	5.1	E1-109 E2-208 E3-27 E4-16	19.5
13-15	176	4.7	E1-35 E2-120 E3-18 E4- 3	20.4
16-16+	55	3.8	E1- 5 E2-27 E3-23 E4- 0	21.0

[a]The highest alternative for age on the test was "21 or over"; therefore, the mean age for each group is somewhat underestimated.

[b]One man at this education level failed to denote his rank or months in service.

ACHIEVEMENT TEST

The Achievement Test for each man was scored. Then, to obtain an overall picture of the performance of men on each item in the test, a matrix of test items by education levels was constructed (29 test items x 5 education levels). The tabulation of frequencies in this matrix revealed two items on which performance was extremely poor. After examining the kinds of answers men selected for the items, it was decided that both items were misleading and should be deleted from the test, thus reducing the Achievement Test from 29 items to 27.

The mean performance of men in the five education levels on the 27 test items is shown in Table 2.

Table 2

Performance of Men on Achievement Test

Education Level	N	Mean Number Correct	Percent Correct
0-8	30	20.3	75.1
9-11	147	19.4	71.7
12	361	21.0	77.7
13-15	176	22.1	81.7
16-16+	55	23.1	85.4

With the exception of the performance of men in the 9-11 education level, increased test score appears to accompany increased education level. The difference between groups, however, was not striking. The average college graduate scored only 10% higher than the man with an education level of grade school or less. Considering that the items tested the minimal basic information that everyone should know to get along well, all men might benefit from a GED course focused on such information.

To determine whether there was a significant relationship between education level and score on the Achievement Test, the distribution of frequencies was subjected to a chi square test. The observed frequencies were cast into a 5 x 5 contingency table (Table 3). To avoid having cells with zero frequencies, it was necessary to group scores in this fashion. In addition, to preserve meaningfulness of the grouped score categories, it was necessary to eliminate test scores of 12 or below. This removed all cells with zero frequencies except one, and reduced the total N from 769 to 757. Table 3 shows the observed frequencies for the resulting matrix.

Table 3

Grouped Distribution of Scores by Education Level

Score	Education Level					Total
	0-8	9-11	12	13-15	16-16+	
13-15	3	17	13	1	0	34
16-18	5	36	47	12	2	102
19-21	11	48	116	42	9	226
22-24	8	42	148	91	30	319
25-27	3	1	31	27	14	76
Total	30	144	355	173	55	757

The chi square obtained was 104.6. With 16 degrees of freedom, this value is significant at $p < .001$. The null hypothesis that the two criteria of classification are independent is therefore rejected, leading to the conclusion that higher-educated men do significantly better than lower-educated men. The correlation, expressed by a contingency coefficient, between education level and achievement score is C = .35.

A detailed analysis of the clusters of achievement items was undertaken to identify particular deficiencies in practical knowledge. Figure 1 shows the percent of errors for each of the clusters of items from the achievement test. For each area, Figure 1 shows that the greater the educational achievement, the fewer the errors, with the exception of the grade school group (A), which consistently showed fewer errors than the high school dropouts (B). The finding that high school dropouts did most poorly suggests that this group represents individuals with true academic problems, whereas the men with grade school education or less (A) may represent individuals who had to leave school for non-academic reasons (e.g., to help support a family).

Figure 1 shows that college graduates (E) made the least errors in all areas, that high school dropouts (B) made the most errors in all areas, and that men with grade-school education (A) not only did better than high school dropouts, but also did as well or slightly better than high school graduates on health and money items.

An examination of the number of errors in each area shows that all the men did poorly on insurance items and relatively well on health items. Also, the difference between the highest and lowest groups on insurance items and health items was relatively small (10.5% difference on insurance, 8.1% on health).

The greatest difference was between high school dropouts and college graduates, and this difference was greatest for money items (16.9% difference) and for buying (16.4% difference). This result may reflect a difference in the socioeconomic background of the two groups. The college graduate group had a significantly greater proportion of whites than the high school dropout group ($\chi^2 = 4.7$, $df = 11$, $p < .05$). Since whites generally are in a higher economic bracket than non-whites, they probably have a greater opportunity to learn about such things as banking and finance from their parents. College graduates coming from higher income brackets presumably have more opportunity to learn about money matters.

The percentage of errors for each content area by educational group that went into the makeup of Figure 1 can be seen in Table 4. Note that the scores of men in two areas (money and health) are based on only three and two items, respectively. Each of these areas had been reduced by one when the total number of items was reduced from 29 to 27.

Table 4

Number and Percent of Errors on Achievement Test by Item Areas

Education Level	N	Areas									
		Money (3 items)		Insurance (6 items)		Legal (6 items)		Health (2 items)		Buying (10 items)	
		No.	%	No.	%	No.	%	No.	%	No.	%
A 0-8	30	15	16.7	63	35.0	38	21.1	2	3.3	84	28.0
B 9-11	147	104	23.6	333	37.8	219	24.8	29	9.9	437	29.7
C 12	361	191	17.6	674	31.1	423	19.5	46	6.4	842	23.3
D 13-15	176	59	11.2	293	27.7	164	15.5	20	5.7	333	18.9
E 16-16+	55	11	6.7	90	27.3	40	12.1	2	1.8	73	13.3
Mean %			15.1		31.8		18.6		5.4		22.6
Percent difference, B – E			16.9		10.5		12.7		8.1		16.4

Percent Errors on the Achievement Test as a Function of Education Level and Type of Item

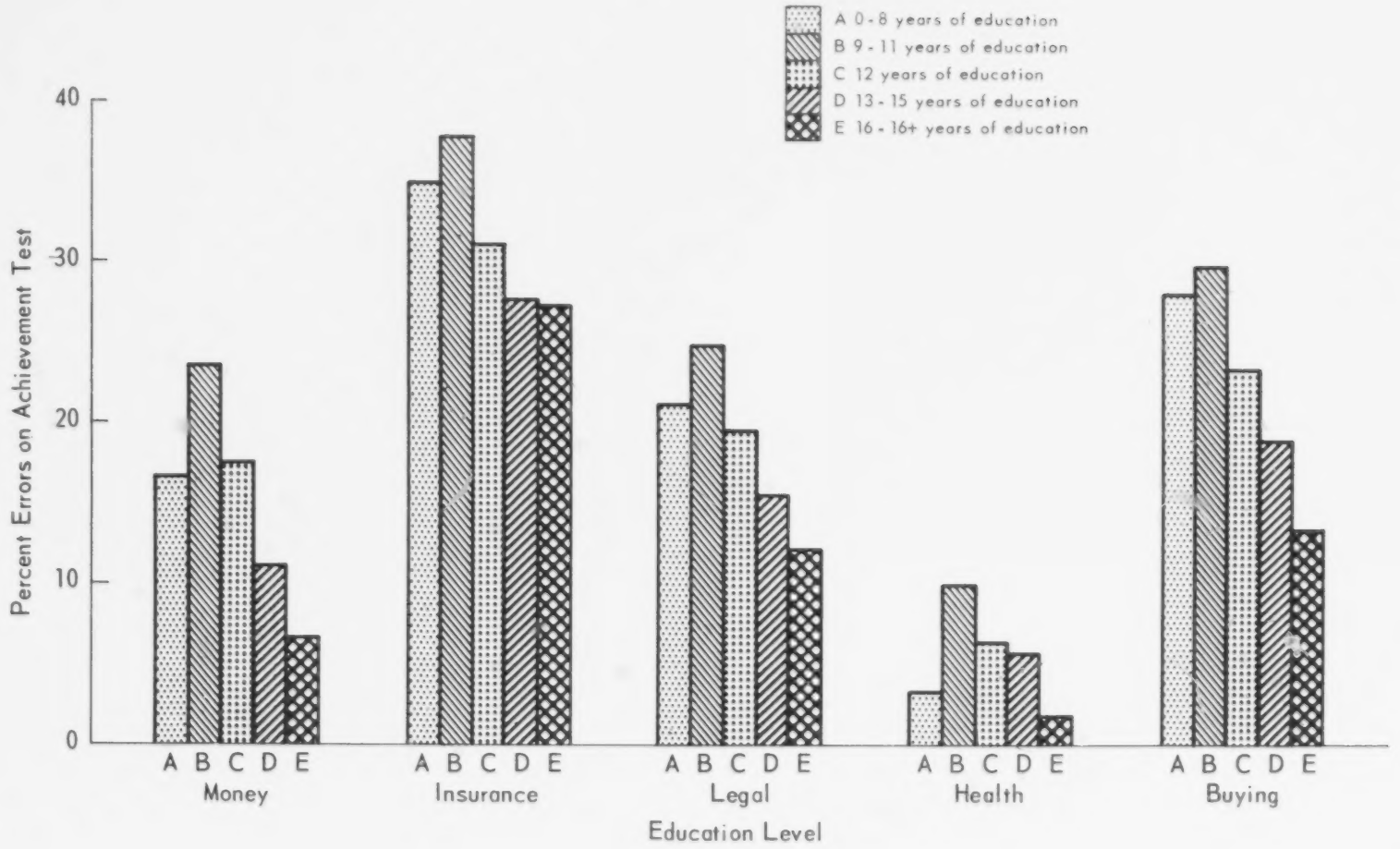

Figure 1

A detailed item analysis revealed some particular deficiencies in practical knowledge. The highest and lowest percent errors are reported. For example, between 76% (high school dropouts) and 70% (college graduates) didn't know what comprehensive automobile insurance was (item 22). Over 65% of high school dropouts and over 31% of college graduates didn't know the difference between collision insurance and liability insurance (item 31), and between 40% (grade school) and 14% (college graduates) couldn't distinguish between liability, term, hospitalization, and fire and theft insurance (item 14). Over 56% (grade school) and 40% (college graduates) didn't know that they should have a repairman contact them if something is found wrong that was not included in an original estimate of the cost of work (item 13). Over 53% (high school dropouts) and 29% (college graduates) didn't know what signs to look for when buying a car (item 18).

Over 42% of high school dropouts and 7% college graduates didn't know about different kinds of bank accounts (savings, checking, Christmas Club; item 26). This item reveals a great disparity between educational groups and knowledge of handling money. Between 57% (grade school) and 27% (college graduates) didn't know the function of a small claims court (item 8), and between 42% (high school dropouts) and 33% (grade school) didn't know the function of the Legal Aid Society (item 11).

These items represent minimal basic knowledges a person should have, and the poor performance of the subjects on these items indicates the need for a special education program.

ATTITUDE SCALE

In order to evaluate results from the Attitude Scale, it was necessary to establish some criterion for discriminating between good vs. poor attitudes. To solve this problem, five raters independently checked the answers that they felt indicated the *best* attitude in terms of being most supportive to a relationship or specific behavior as indicated by the item.[1] The five raters were four Ph.D. psychologists and an enlisted man who holds a B.A. in psychology and has completed some graduate work in the subject.

Raters were asked not to indicate their personal attitude but to choose what they felt was the ideal attitude. Only items for which there was 100% agreement among the five raters were used in the evaluation of good vs. poor attitude. Seven items were thus deleted from the scale (Items 20 and 24 from Relationship With Supervisors, 4 and 11 from Relationship With Peers, 8 from Attitude Toward Spending, and 14 and 29 from Attitude Toward Personal Health). This left 38 items in the scale for which there was 100% agreement among raters as to the best attitude.

The analysis of good and poor attitudes for each education level for the overall attitude scale (except for items from the cluster, Attitude Toward Salesmen) is shown in Figure 2. The high school dropouts, who did most poorly on the Achievement Test, responded with the highest percentage of poor attitudes. Figure 2 shows that, generally, the percentage of poor attitudes decreases with educational level and good attitudes increase with more education. The exception is the 0-8 year group, which scored relatively high on good attitudes and low on poor attitudes. (It is necessary to look at both good and poor attitudes because of the third category, "Undecided," which makes the percentage of good and poor attitudes not strictly complementary). Thus, generally speaking, the more education a man has, the better his attitude.

[1] See Appendix B for Attitude Scale items and the answers that were rated as indicative of a good attitude or relationship.

Percent of Subjects in Each Education Level Showing Good and Poor Attitudes Based on the Entire Attitude Scale

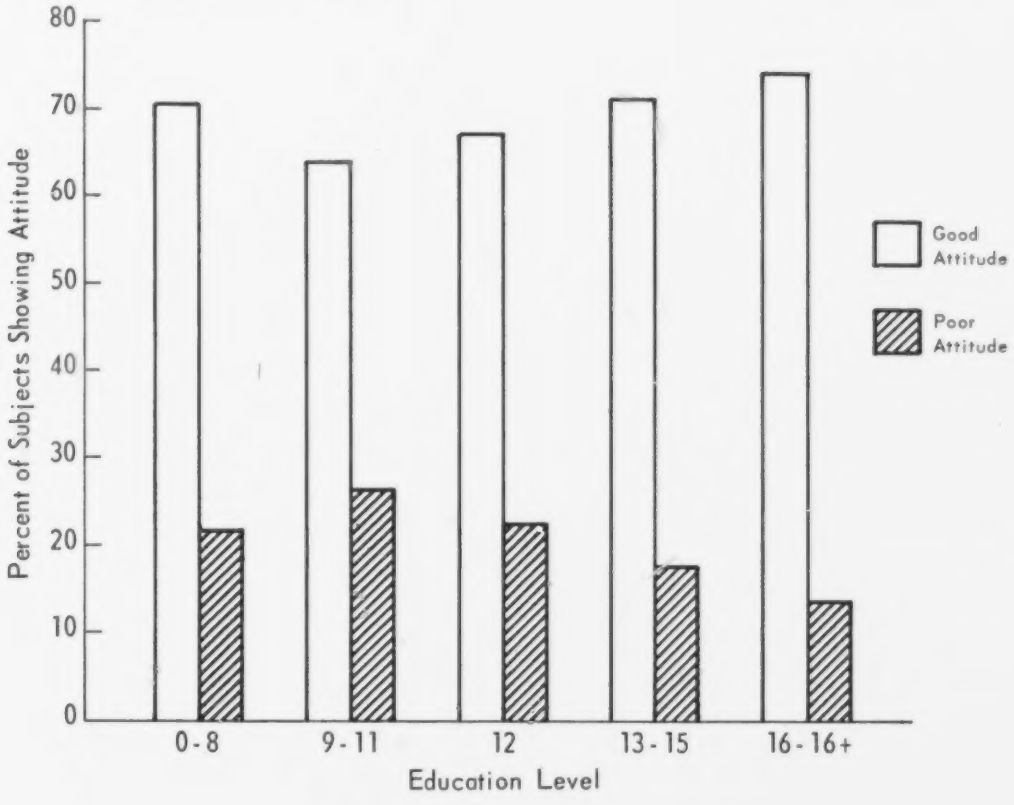

Figure 2

To determine which items, if any, showed significant relationships between education level and attitude, a matrix of education level and attitude (5 x 3 contingency table) was formed for each item. With eight degrees of freedom, the chi square value must reach 20.9 to establish significant correlation ($p < .01$) between education level and attitude for an item. This value of chi square was reached or exceeded on 11 items. These items are listed in Table 5 along with their respective chi squares and contingency coefficients.

A comparison of the mean percent of responses rated as poor attitude and the mean percent of errors on the Achievement Test for each educational group is shown in Figure 3. The mean are based upon the entire scales, and they show a remarkable correlation between the two sections of the questionnaire. Errors on the Achievement Test and poor attitudes from the Attitude Scale are highly correlated with the percentage of poor attitudes and errors decreasing with increasing educational levels. Again, the exception is the grade school group, which was lower than high school dropouts on both errors and poor attitudes.

There are three possible interpretations of this correlation: (a) poor attitude causes poor achievement, (b) poor achievement causes poor attitude, or (c) both attitude and achievement items reflect a common source of variance. The researchers favor the

Table 5

Items Showing Relationship Between Education Level and Attitude

Area and Item	Chi Square	Contingency Coefficient
Attitude Toward Spending		
8	32.6	.20
18	21.6	.17
42	23.5	.17
Relationship With Peers		
10	27.5	.19
34	24.4	.18
38	25.6	.17
Attitude Toward Getting Help		
12	48.1	.24
Attitude Toward Personal Help		
25	20.3	.16
41	21.6	.17
Relationship With Family		
28	28.4	.19
Individual Responsibility		
44	24.4	.18

Comparison of Mean Percent Poor Attitude and Mean Percent Errors on Achievement for Each Education Level

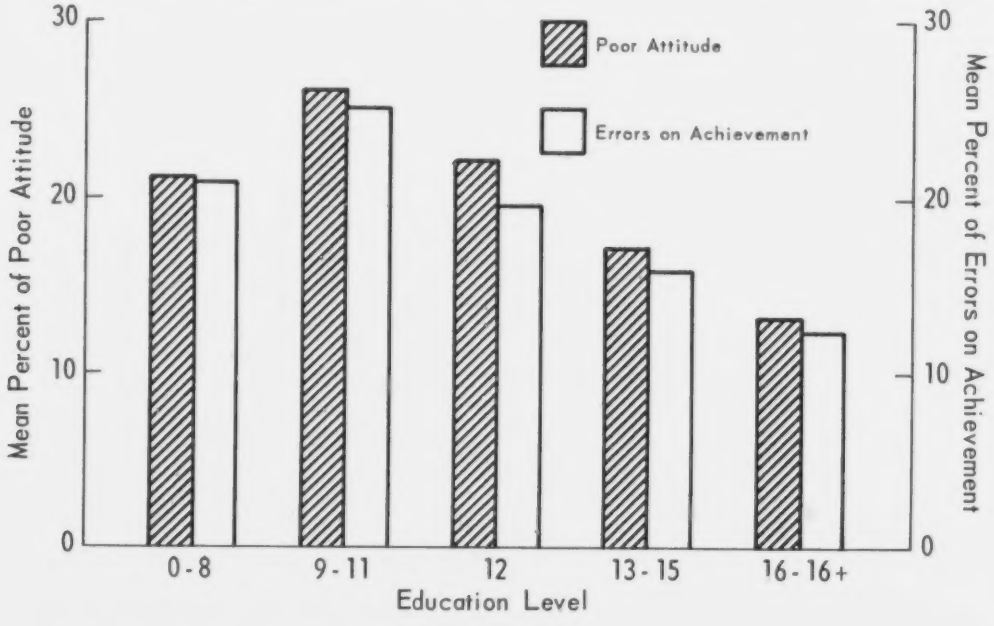

Figure 3

interpretation that both reflect a common source of variance, which is practical knowledge. The achievement items, by definition, reflect practical knowledge, and a close examination of the Attitude Scale reveals that attitudes rated poor also reflect a low level of practical knowledge.

For example, the answer "Agree" was rated as indicating a poor attitude to "Medical insurance is useless" (item 25) and to "I would not go to a dentist unless I had a toothache" (item 41). Agreeing with these items reflects an ignorance of the function of medical insurance and preventive dentistry. The subject who agrees to "... borrow money even if it meant ... [paying] high interest" (item 15) or who prefers a loan company to a bank (item 18) is showing ignorance of interest rates. A subject who sneaks out the back door rather than help his father (item 28), hits a friend who makes a joke about him (item 10), or ignores his date because he doesn't like her (item 34), is showing ignorance of how to get along smoothly in social relationships (see Appendix B).

This interpretation of the Attitude Scale—that it reflects practical knowledge—reinforces the findings from the Achievement Test that educational level is correlated with practical knowledge, and that all groups could benefit by a course in practical matters.

The relationship between educational level and attitude in each attitude area (Relationship With Supervisor, Relationship With Family, Relationship With Peers, Attitude Toward Salesmen, Attitude Toward Spending, Attitude Toward Getting Help, Attitude Toward Personal Health, and Individual Responsibility) reflects the general relationship seen in Figure 2, that attitude improved with educational level.

Table 6 shows the percentage of good, poor, and undecided responses averaged for each cluster of items (Relationship With Supervisor, Relationship With Family, etc.). The college graduates (16-16+) score highest in percent of good attitudes in most areas, and they generally score lowest in percentage of poor attitudes. On the other hand, high school dropouts generally score lowest in percentage of good attitudes and highest in percentage of poor attitudes.

Table 6

Percent of Good and Poor Attitudes for Each Attitude Area by Education Level

Attitude Areas	Education Level														
	0-8			9-11			12			13-15			16-16+		
	Good	Poor	Un[a]	Good	Poor	Un	Good	Poor	Un	Good	Poor	Un	Good	Poor	Un
Supervisor	70.0	23.3	6.6	55.5	36.3	8.2	64.3	25.5	10.2	66.2	22.3	11.4	76.4	10.9	12.7
Family	76.7	15.8	7.5	69.2	19.0	11.8	71.9	17.2	10.9	77.9	10.9	11.3	78.2	11.4	10.5
Peers	69.7	19.0	11.3	61.2	26.9	11.8	64.7	21.2	14.0	67.9	18.7	13.4	70.2	16.5	13.3
Salesmen	15.0	73.3	11.7	20.9	69.5	9.6	22.0	67.5	10.5	21.4	70.0	8.6	14.5	77.3	8.2
Spending	63.9	28.9	7.2	56.0	32.5	11.4	60.0	28.6	11.4	60.9	26.6	12.6	74.5	18.8	6.7
Help	60.0	34.4	5.6	67.4	22.4	10.3	67.7	22.2	10.2	73.5	16.2	10.3	78.8	14.5	6.7
Health	78.7	17.3	4.0	76.3	19.9	3.8	76.6	17.7	5.7	84.7	11.4	3.9	90.2	7.3	2.5
Responsibility	75.7	14.3	10.0	62.5	28.6	8.9	65.1	25.0	9.9	67.4	20.7	11.8	73.2	16.6	10.1
Mean Percent	70.6	21.9	7.5	64.0	26.5	9.5	67.2	22.5	10.3	71.2	17.8	10.7	77.4	13.7	8.9

[a]Un = Undecided

The relationship between attitude and educational level can be seen more clearly in Tables 7 and 8 which present the data from Table 6 in rank order. Table 7 shows that college graduates ranked the highest (1) in percentage of good attitudes in all areas except Responsibility, on which they ranked second, and except for Attitude Toward Salesmen, in which they ranked lowest. All groups exhibited poor attitudes towards salesmen.

Table 7

Rank[a] Order of Good Attitudes

Attitude Areas	Education Level				
	0-8	9-11	12	13-15	16-16+
Supervisors	2	5	4	3	1
Family	3	5	4	2	1
Peers	2	5	4	3	1
Salesmen	4	3	1	2	5
Spending	2	5	4	3	1
Help	5	4	3	2	1
Health	3	5	4	2	1
Responsibility	1	5	4	3	2

[a]1 is highest percentage of good attitude, 5 is lowest percentage of good attitude.

Table 8

Rank[a] Order of Poor Attitudes

Attitude Areas	Education Level				
	0-8	9-11	12	13-15	16-16+
Supervisors	3	1	2	4	5
Family	3	1	2	5	4
Peers	3	1	2	4	5
Salesmen	2	4	5	3	1
Spending	2	1	3	4	5
Help	1	2	3	4	5
Health	3	1	2	4	5
Responsibility	5	1	2	2	4

[a]1 is highest percentage of poor attitude; 5 is lowest percentage of poor attitude.

The grade school (0-8 years) group generally ranked favorably on good attitudes, except in the area of Asking for Help, in which they ranked lowest. There was a perfect correlation between attitude towards Asking for Help and educational level. The more the education, the more likely a person would be to get a lawyer when needed, know how to handle legal problems, and ask his boss for help (see items 9, 12, and 13, Appendix B). Thi indicates that the undereducated man does not use the available resources for handling legal problems, possibly because he does not have the necessary knowledge (see Figure 1, achievement on legal items). This result suggests the desirability of a training program that includes practical information such as how to obtain a lawyer, where to go for legal aid, or how to read leases or contracts.

Table 7 also shows that the grade school group (0-8) scored highest on individual responsibility, even though they were reluctant to ask for help. The high school dropouts (9-11) showed the least individual responsibility, and individual responsibility generally increased with education level.

Some interesting correlations between areas of achievement and areas of attitude can be seen by comparing Table 6 and Figure 1. Table 6 shows that all subjects had their highest percentages of good attitudes in the personal health area, which complements the findings that achievement was highest on health items (see Figure 1).

Table 8 shows that high school dropouts had the poorest attitude toward spending, which correlates with the finding that they made the most errors on money items on the Achievement Test (see Figure 1). Thus, the sub-areas of the two sections of the questionnaire are correlated as well as total scores for the two main sections, Achievement and Attitude.

DISCUSSION

The questionnaire results show that the level of achievement in practical knowledge and percentage of good attitudes generally increase with the educational level. This suggests that undereducated men could benefit most from a functional GED program. However, the percentage of difference between performance of college graduates and undereducated men is small (about 13%), suggesting that the practical knowledge covered by the questionnaire is not systematically taught in the public schools or colleges.

Also, the material covered by the questionnaire represents minimal basic information every man should have, and no group did outstandingly well, with scores ranging from 85% for college graduates to 71% for high school dropouts. This suggests that, while the men tested did possess appreciable proportions of the basic information every adult should have, there were, typically, knowledge flaws that when corrected would be expected to improve their functioning in society. Therefore, a GED program covering practical problems incurred in handling money, buying things, buying insurance, handling legal problems, getting help, and in getting along with other individuals would be beneficial for every man going into the Army.

Content material for such a course is readily available from a variety of governmental and commercial sources. For example, the course might be based upon *Consumers All*, one of the yearbooks of The Department of Agriculture.[2] The book covers a wide variety of practical topics, including the following:

Finances—owning and renting, mortgages, installment credit, the family budget, insurance, medical bills, savings on cars, the employed wife, etc.

Safeguards—motor accidents, fire protection, household insects, health care, health services, welfare services, help in disaster, help in nutrition.

Welfare Services—where to go for vocational counseling, financing, personal problems, adoptions; where to get help for such everyday problems as dog bites, food poisoning, lost children, rescue of animals; names and addresses of agencies for children's services, employment, family counseling, federal insurance programs, financial assistance, and legal advice; agencies for organized leisure time and for formal education programs, services to unmarried parents, temporary shelter, and so forth.

Topics covered in other sections of the book include Houses, Furnishings, Equipment, Plants, Outdoor Activities, Clothing, and Food. Many tables, charts, and drawings are included.

Various types of material suited to providing young men with needed information in the area of consumer education are available from commercial sources. Some such publications can be obtained in the form of self-instructional kits, focusing on such areas as food, clothing, cars, furniture, the law, family health, ways to handle money, endorsing checks, balancing bank statements, buying life insurance, improving communications in marriage, and so forth. Among the many publishers who issue such materials are Grolier Educational Corporation ("Modern Consumer Education"), Entelek Incorporated ("Checks and Endorsements"), and Doubleday & Company ("Your Life Insurance").[3]

Another example of the type of publication that is readily available for adaptation or source material for a GED program on practical problems is *An*

[2] *Consumers All*, the *Yearbook of Agriculture 1965*, Department of Agriculture, Washington, D.C., 1965.

[3] Citations are given as examples only. This does not reflect official endorsement by HumRRO or the Department of the Army.

Instructional Program for Employability Orientation.[4] This handbook, developed for the Department of Labor by the Human Resources Research Organization, was written to provide help to personnel responsible for developing programs of instruction for Work Incentive Program (WIN) orientation training—the portion of the training dealing with general employability and socioeconomic adaptation to society, rather than with specific job skills.

Part I of the handbook deals with determining the curriculum and provides materials for use by a program manager in determining and planning the kinds of instruction that will be needed to meet the needs of the trainee population.

Part II deals with developing instructional content and provides materials for use by classroom instructors or other personnel involved in developing detailed lesson plans. The materials are presented in the form of modules dealing with 18 major topics, including such subjects as Health, Money Management, Community Resources, Job Searching, Job Interviewing, and Employee Relations.

The volume includes many checklists and tests for use in determining the content that would be appropriate for particular trainee categories or judging the effectiveness of training given. Also included in each module are extensive lists of references for additional materials that would be useful in developing training on the topics.

[4] William C. Osborn *et al. An Instructional Program for Employability Orientation*, HumRRO Technical Report 72-4, February 1972.

Appendix A

QUESTIONNAIRE: ACHIEVEMENT TEST

These are the instructions and items from the Achievement Test portion of the questionnaire. Items are arranged in clusters by achievement areas. The number preceding each item indicates its serial position in the actual questionnaire.

Questionnaire: Achievement Test

INSTRUCTIONS

This questionnaire contains several questions and statements. These questions pertain to things that may be pertinent to your life both before and since you entered the Army. The questionnaire is being given to soldiers as part of a HumRRO research project. Your answers will be used for research purposes only, and they will have absolutely no effect upon your position in the Army.

The questionnaire is in two parts.

In Part I, read each question and statement and decide which answer seems best. When you have chosen your answer, use the answer sheet to indicate your choice. Circle the letter on the answer sheet that corresponds to the answer you chose. If you change your mind, erase your first answer completely.

You will find instructions for Part II inside the questionnaire.

There is no time limit in which you must complete the questionnaire, but it should take no more than 30 minutes or so.

Please make no marks on the questionnaire. Place all answers on the answer sheet.

Achievement Test
(Part I)
27 items

Background Information

1. How many years of education have you had?
   A. 0-8
   B. 9-11
   C. 12
   D. 13-15
   E. 16 or more

2. How old are you?
   A. 17
   B. 18
   C. 19
   D. 20
   E. 21 or over

3. What is your race or ethnic group?
   A. White
   B. Black
   C. Oriental
   D. American Indian
   E. Spanish surname
   F. Other

Handling Money

4. A checking account at the bank is probably best used for things like
   A. Very large expenditures only.
   B. Paying bills and making purchases.
   C. Getting interest.

16. You decide to put $500 in the savings account. You leave it there for a year. What would you expect to have in the account at the end of this year?
   A. You would expect another $500.
   B. You would expect to have $500 plus the interest.
   C. You would have $500 minus the interest.
   D. You would have $500 less a service charge.

26. You have some money that you want to put in the bank. Which kind of account would cost you money?
   A. Savings account.
   B. Checking account.
   C. Christmas Club.
   D. All of the above would cost you money.

Insurance

5. Suppose you worked for a company that has a group life insurance plan.
   A. *The plan would probably cost less than if you bought your own policy.*
   B. The plan would probably cost more than if you bought your own policy.

9. You are married and in the Army. You want to buy some insurance that will pay medical benefits if your wife has a baby after you get out of the Army. You should
   A. Get the insurance after you get out of the Army.
   B. Don't get any insurance because your wife may not get pregnant.
   C. Wait until your wife gets pregnant.
   D. Unless you have at least a year left in the Army, get the insurance as soon as possible since most insurance companies have a waiting perior' before this kind of insurance pays any benefits.

14. You want to buy some insurance that will protect you against the loss of your own property. You should buy
   A. Liability insurance.
   B. Term insurance.
   C. Hospitalization.
   D. Fire and theft insurance.

15. A group life insurance plan with your company
   A. Is always better than if you bought your own policy.
   B. Is generally good only while you are employed by the company.

22. You have comprehensive insurance on your car. This means that
   A. The insurance will pay for damage to your car if it is in an accident with another car.
   B. The insurance will pay your hospital bill.
   C. The insurance will pay for damage to your car caused by a fire or hurricane.

31. You own a 1957 Chevrolet that is worth about $100.
   A. You should definitely get collision insurance.
   B. You should carry no insurance at all.
   C. It wouldn't be worth it to you to carry collision insurance.
   D. In this case, you shouldn't carry any liability insurance.

Legal Problems

6. Don has been arrested. He gives his name and address, but he refuses to answer any other questions until he can see his lawyer. Does he have the legal right to do this?
   A. Only if it is a minor crime.
   B. Yes.
   C. No.
   D. Only if he has been subjected to police brutality.

7. You are living in an apartment and have a lease which says that no more than three people may stay with you in your apartment. However, you have four people living with you. What can happen?
   A. The landlord can not legally evict you.
   B. The landlord can evict you.
   C. The landlord would probably double your rent.

8. You loaned a friend $75, but he refused to pay you. What should you do?
   A. Forget the whole thing.
   B. Have him arrested.
   C. Sue him in small claims court.
   D. Beat him up and take the money.

11. Which of the following problems can The Legal Aid Society probably help you with?
   A. You want to sue someone for defamation of character.
   B. You're having trouble at a finance company.
   C. You've been arrested for stealing.

21. Suppose you buy a motorcycle on credit. You've been sick and couldn't work. Therefore, you couldn't make the payments. The store took the motorcycle back.
   A. This is called garnishment and is legal.
   B. This is called repossession and is legal.
   C. This is unfair since you missed the payments through no fault of your own.

25. Suppose you were living in an apartment and you wanted to put in a washer and dryer which would require new wiring.
   A. It would be all right to go ahead and have it done.
   B. You should get the landlord's permission.

Health Matters

28. A man comes to your door claiming to be a doctor. He has a machine he wants to sell you. This machine can cure any disease—heart trouble and cancer, for example. This doctor is probably
   A. A good doctor.
   B. A quack.
   C. A medical student.
   D. He has a good machine but can't get anybody to believe him.

32. You have the flu, but you feel too bad to go to the doctor. Your wife had the same illness about a year ago and still has some of the pills that the doctor prescribed for her.
   A. It would be all right to take some of her pills, since it was the same illness.
   B. You should go to the doctor.
   C. Take twice the dosage recommended for her since the pills are old.

Buying Things

10. You usually buy a highly advertised brand of headache tablets at your druggist's. One day the druggist tells you that he has a cheaper brand, but you have never heard of this brand. You ask the druggist which is the better for a headache. The druggist would probably reply
   A. They're both about the same
   B. The highly advertised brand is much better, but the price isn't worth it.
   C. The cheap brand is by far the better.

12. You want to buy a sports jacket in a clothing store and the salesman says that it has double stitching. This means
   A. The jacket has good tailoring.
   B. The material is bad and had to be sewn twice.
   C. The jacket has bad tailoring.
   D. It is probably a cheaper brand.

13. Suppose you take your stereo to the shop for repairs, and you get an estimate of $20. The repairman says that he'll fix anything else that's wrong with it. What should you do? Read all answers before selecting.
    A. Tell him that $20 is the limit; don't do anything that costs more than that.
    B. It's okay to fix whatever's wrong with the set.
    C. Tell him to call you if he finds anything else wrong with it.
    D. Both A and C.

17. You have a 3-year-old automobile that needs repairs. What is probably your best bet for finding a good repairman?
    A. A small garage that has given you lots of good work in the past.
    B. An authorized garage, even if you don't know anything about their work.
    C. Look up garages in the phone book.
    D. Buy a manual and try the repair work yourself, even if you don't know much about repairing cars.

18. You want to buy a used car. When you push up and down on the fender, the car keeps rocking several times, even after you've stopped. This is probably (Read all answers before selecting)
    A. A good sign.
    B. A bad sign.
    C. A sign that the shock absorbers need replacing.
    D. Both B and C.

19. You want to buy a bathing suit that is labeled "Preshrunk." This means:
    A. It will shrink when you go swimming.
    B. It will shrink when it is washed and dried.
    C. It will shrink very little, if at all.

20. Someone in your family dies, and you have to make all the funeral arrangements. You choose a marker, and it is probably
    A. More expensive than a tombstone.
    B. About the same as a tombstone.
    C. Less expensive than a tombstone.

24. Suppose you were shopping for some canned food in a grocery store. Which would probably cost you less?
    A. A nationally advertised brand.
    B. A brand produced by the store (house brand).

27. At which food store would you probably pay less for groceries?
    A. A local grocery store, privately owned.
    B. A supermarket that is part of a chain of stores.
    C. A small local store (it may be a chain store) that sells some food, magazines, etc.

29. You want to buy a car that is three years old and has 85,000 miles on it. This is
    A. Less mileage than the average driver puts on his car.
    B. About average mileage for a car that old.
    C. More than the average driver puts on his car in three years.
    D. I'm not sure if it's average, below average or above average mileage.

(Deleted)

23. Suppose you share the expenses of an apartment with a friend and you pay only two bills every month, probably the phone bill and the gas bill. You would like to pay these bills by mail. Which would be the *cheapest* and the safest way to do this?
    A. Pay the bills by check.
    B. Pay by money order.
    C. Send it in cash.

30. You are out of a job and broke. You go to a public hospital outpatient clinic for treatment. In general, will you have to pay for the treatment?
    A. Yes.
    B. No.

Appendix B

QUESTIONNAIRE: ATTITUDE SCALE

Items from the Attitude Scale portion of the questionnaire are contained in this appendix. Items are arranged in clusters by areas. The numbers preceding each item indicate its serial position in the actual questionnaire. The abbreviations in the rating column mean: Ag = Agreed; Dis = Disagreed.

Attitude Scale
(Part II)
45 items

		Answer Rated as Indicative of a Good Attitude
	Relationship With Supervisor	
1.	If my supervisor asked me to do something like sweep the floor or unload a truck, and it wasn't part of my job, I wouldn't do it.	Dis
20.	If my boss makes a mistake, I'll tell him about it.	(Deleted)
24.	If a fellow worker was habitually tardy, I would tell our supervisor.	(Deleted)
	Relationship With Family	
2.	If my parents asked me to take a couple of hours or so to clean the garage while I was home on leave, I'd do it.	Ag
5.	I would not insist on having the car if my brother or sister claimed they needed it.	Ag
28.	If my dad asks me to do something that I don't really want to do, I'll sneak out the back door if I can.	Dis
40.	If I had to choose between watching a baseball game on TV and helping my dad paint the house, I'd watch the game.	Dis
	Relationship With Peers	
3.	I would not go on a blind date with a girl if I didn't like her after we met.	Dis
4.	If my buddies wanted to go to a movie and I wanted to do something else, I'd end up going with them.	(Deleted)
7.	I would not argue or get mad at a fellow worker unless I thought he was absolutely wrong about something.	Ag
10.	If a friend made a joke at my expense, I'd probably hit him.	Dis
11.	If a fellow worker didn't do his share, I'd be sure to tell him about it.	(Deleted)
22.	If I catch a mistake that a fellow worker had made, I'll tell the worker about it rather than our supervisor.	Ag
33.	If I had to choose between ratting on a close friend and taking the blame myself for some minor incident at work, I'd take the blame myself.	Ag

		Answer Rated as Indicative of a Good Attitude
34.	If I find I don't like the girl I'm out with, I ignore her so she won't feel bad when I don't ask her out for another date.	Dis
35.	If I'm on a double date with my best friend, and I like his date better than mine, I'll try anything to take her away from him.	Dis
36.	If I have $10 to spend on something I really want, and my best buddy asks to borrow $5 "just till tomorrow," I'll tell him I don't have the money.	Dis
37.	If I have made a blind date with my friend's girlfriend's cousin, and I have the opportunity to go out with a real good looking girl I've been itching to date, I'll break the blind date.	Dis
38.	If a fellow worker got me in trouble for something I didn't do, I'd figure out a way to get him in trouble to pay him back.	Dis
	Attitude Toward Salesmen	
6.	I would make a loud complaint if I thought a salesman was trying to "pull a fast one" on me.	Dis
30.	I tend to doubt what a salesman tells me; I always want to see the written guarantee.	Dis
	Attitude Toward Spending	
8.	I would not buy something I really wanted if it meant I'd have to skimp on other things.	(Deleted)
15.	I would be willing to borrow money to get something I really wanted even if it meant I had to pay high interest.	Dis
16.	If I were going to make a large purchase on time, it wouldn't be worth it to me to pay extra money to insure the debt.	Dis
18.	If I wanted to borrow some money, I would rather go to a bank than to a loan company.	Ag
19.	When buying food, I always compare the weights as well as the prices of items.	Ag
27.	When the cashier at the grocery store is ringing up my purchases, I always watch carefully to make sure she makes no errors.	Ag
42.	If I was newly married and we needed to buy an appliance (like a stove or a refrigerator), I would insist on buying a new one.	Dis

		Answer Rated as Indicative of a Good Attitude
	Attitude Toward Getting Help	
9.	I would not hesitate to get some help from a lawyer if I thought I needed it.	Ag
12.	I would not know what to do if I got into "legal trouble."	Dis
13.	If I had a personal problem I'd keep it to myself before I'd ask my boss for help.	Dis
	Attitude Toward Personal Health	
14.	If I had to select and buy my own food, I'd know what things I should buy for my health's sake.	(Deleted)
17.	I would not bother to have my teeth checked unless I had a toothache.	Dis
23.	I think it's unnecessary to have your eyes checked except when they're bothering you.	Dis
25.	Medical insurance is useless; I never get sick.	Dis
29.	I would go to the doctor only if I was very sick.	(Deleted)
32.	If I felt real sick, I'd go to the drug store and buy a "home remedy" rather than pay for a doctor's visit and possibly an expensive prescription.	Dis
41.	I would not go to a dentist unless I had a toothache.	Dis
	Individual Responsibility	
21.	If I find that there's too much money on my paycheck, I will notify the proper person.	Ag
26.	If I put a dent in the neighboring car while backing out of my parking space, I'll leave my name, address, and telephone number on a piece of paper under the windshield wiper so the person can get in touch with me.	Ag
31.	If a cashier gave me too much change, I'd tell him about it, no matter what the amount.	Ag
39.	If I wanted to leave on a Friday for a weekend trip, I'd call in sick at work.	Dis
43.	If I lost my driver's license, I would never borrow a friend's license.	Ag
44.	I would never lie about my age just so I could get cheaper insurance for my car.	Ag
45.	If I wanted to sell something I owned (like a radio or camera), and it didn't work quite right, it would be all right not to tell the buyer.	Dis

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13. ABSTRACT

To obtain information about problems of adaptation common to undereducated men, and to obtain information about knowledges and skills such men may not have, an achievement test/attitude questionnaire was administered to a large group of enlisted men. The instrument was designed to assess men's attitudes and skills with respect to financial, health, insurance, legal, and interpersonal problems. Men who took the test ranged in education level from less than 8 years to over 16 years. Higher educated men performed significantly better on the achievement test than did lower educated men, but high school dropouts (education level 9-11 years) consistently scored lowest of all. When attitude scale items were categorized as reflecting good vs. poor attitudes, poor attitudes decreased as education level rose. The results showed a strong correlation between errors on the achievement test and percentage of poor attitudes.

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Admission Standards						
Enlisted Personnel						

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2 CG USA ALASKA ATTN ARACO APO 98749 SEATTLE
2 CG US ARMY EUROPE APO 09403 NY ATTN OPNS DIV
1 CG ARMY TRANS REG COMD FT EUSTIS ATTN TECH LIB
1 CG USA AD COMD ENT AFB ATTN ADGPA CODO
6 CG 1ST ARMY ATTN DCSOT FT MEADE MD
1 CG 3RD ARMY ATTN DCSOT FT MCPHERSON
4 CG SIXTH ARMY PRES OF SAN FRAN ATTN AMOPS-T2
1 CG EUSA ATTN AG-AC APO 96301 SAN FRAN
2 CG EUSA ATTN G-3 APO 96301 SAN FRAN
1 CLIN PSYCHOL SERV DEPT OF NEUROPSYCHIAT WALTER REED GEN HOSP
1 DIR MEL APG MD
1 CG USA CDC EXPERIMENTATION COMD FT ORD
2 ENGNR PSYCHOL LAB PIONEERING RES DIV ARMY NATICK LABS NATICK MASS
4 TECH LIB ARMY NATICK LABS NATICK MASS
3 CO DEF DEVEL ENGNR LAB EDGEWOOD ARSENAL ATTN LEMN
2 INST OF LAND CBT ATTN TECH LIB FT BELVOIR VA
1 CO USA CDC C&R AGCY ALA
1 REDSTONE SCIENTIFIC INFO CTR US ARMY MSL COMD ATTN CHF DOC SEC ALA
1 CO FT HUACHUCA SPT COMD USA ATTN TECH REF LIB
2 CG US ARMY CDC EXPERIMENTATION COMD FT ORD
1 SIXTH USA LIB DEPOT BLDG M 13 14 PRES OF SAN FRAN
1 CHF DEPT OF CLIN & SOC PSYCH WALTER REED ARMY INST OF RES WASH D C
1 PLNS OFCR PSYCH HQTRES USACDCEC FT ORD
5 CG FT ORD ATTN G3 TNG DIV
1 CO DUGWAY PG UTAH ATTN TECH LIB
1 DIR WALTER REED ARMY INST OF RES WALTER REED ARMY MED CTR
2 DIR WRAIR WALTER REED ARMY MED CTR ATTN NEUROPSYCHIAT DIV
1 CO HQ ARMY ENLISTED EVAL CTR FT BENJ HARRISON
1 TECH LIB BOX 22 USACDC EXPERIMENTATION COMD FT ORD
1 HUMAN FACTORS TEST DEV (ADME) USAF HOSP EGLIN AFB
1 CO USA MOBILITY EQUIP R&D CTR ATTN TECH DOC CTR FT BELVOIR
1 CO FRANKFORD ARSNL ATTN SMUFA-N6400J2J2-4 PA
1 CG 2ND RGN ARAUCOM RICHARDS-GEBAUR AFB MO
3 6TH RGN USARADCOM FT BAKER
1 4TH ARMY MSL COMD AIR TRANSPORTABLE SAN FRAN
1 PERS SUBSYS DIV CREW SUBSYS DIRCT AERO SYS DIV WRIGHT-PAT.
1 DIR ARMY BD FOR AVN ACCIDENT RSCH FTRUCKER
2 CO PICATINNY ARSNL BLDVER N J ATTN SMMPA VCI
1 LIB DEF SUPPLY AGCY CAMERON STA VA
2 CO USA CDC AG AGCY FT BENJ HARRISON IND
1 REF M MS IS NASA ALA
1 CO USA CBT DEVEL COMD TRANS AGCY FT EUSTIS
1 CO ARMY CDC INF AGY FT BENNING
1 CO ARMY CDC ARMOR AGY FT KNOX
8 USA CDC SPEC WARFARE AGENCY FT BRAGG
1 CO US ARMY CDC AVN AGCY FT RUCKER
1 DIR OF INTERN TNG USA LOG MGT CTR FT LEE
3 CO USA CDC CBT SUPPORT GP FT BELVOIR
3 CO USA TNG CTR (FA) ATTN AKPSITC-ET FT SILL
1 CG USA TNG CTR & FT LEONARD WOOD ATTN ACOFS G3
1 CG USA INF CTR ATTN AJEGT-T FT BENNING
1 CG USA TNG CTR INF ATTN ACOFS G3 FT DIX
1 CG USA TNG CTR ATTN ACOFS G3 FT JACKSON
1 CG USA TNG CTR INF ATTN ACOFS G3 FT LEWIS
1 CG USA TNG CTR INF & FT ORD ATTN ACOFS G3
61 CG USA TNG CTR INF ATTN ACOFS G3 FT POLK
5 CO USA MED TNG CTR ATTN DIR OF TNG FT SAM HOUSTON
20 CG USA AD CTR ATTN G3 FT BLISS
1 CG USA TNG CTR INF ATTN ACOFS G3 FT CAMPBELL
3 LIB ARMY WAR COLL CARLISLE PKS
1 CO USA INTELL SCH ATTN AHUH-S-AT FT HUACHUCA
1 COMDT COMD & GEN STAFF CO FT LEAVENWORTH ATTN ARCHIVES
1 DIR OF MILIT PSYCHOL & LDRSHP US MILIT ACAD WEST POINT
1 US MILIT ACAD WEST POINT ATTN LIB
1 COMDT ARMY AVN SCH ATTN DIR OF INSTR FT RUCKER
2 COMDT ARMY SECUR AGY TNG CTR & SCH FT DEVENS ATTN LIB
1 COMDT INDSTR COLL OF THE ARMED FORCES FT MCNAIR
2 COMDT NATL WAR COLL FT LESLEY J MCNAIR ATTN CLASSF RECORDS AK LIB
1 STIMSON LIB MED FLD SERV SCH ANNEX ARMY MED CTR FT SAM HOUSTON
10 COMDT THE ARMOR SCH ATTN CDE FT KNOX
1 COMDT ARMY ARMOR SCH FT KNOX ATTN WEAPONS DEPT
1 LIB USA ARMOR SCH FT KNOX
1 COMDT USA CHAPLAIN SCH ATTN DDE FT HAMILTON
1 COMDT ARMY CHEM CORPS SCH FT MCCLELLAN ATTN EDUC ADV
1 COMDT USA FIN SCH ATTN CHF DOC DEV LIT PLN DIV DDOE ENL
1 USA FINANCE SCH FT BENJ HARRISON ATTN EDUC ADV
4 COMDT ADJ GEN SCH FT BENJ HARRISON ATTN EDUC ADV
1 COMDT USAIS ATTN EDUC ADV FT BENNING
1 COMDT USAIS ATTN AJIIS-G-EPRD FT BENNING
1 HQ US ARMY ADJ GEN SCH FT BENJ HARRISON ATT COMDT
1 LIB ARMY QM SCH FT LEE
1 COMDT USA QM SCH FT LEE ATTN EDUC ADV
1 COMDT ARMY TRANS SCH FT EUSTIS ATTN EDUC ADV
1 CG USA SEC AGY TNG CTR & SCH ATTN IATEV RSCH ADV FT DEVENS
1 COMDT USA MIL POLICE SCH ATTN PLNS &PROG DDOE FT GORDON
2 COMDT US ARMY SOUTHEASTERN SIG SCH ATTN EDUC ADV FT GORDON
1 COMDT USA AD SCH ATTN DOE FT BLISS
1 CO USA ORD CTR & SCH CFC OF OPS ATTN AHHN-O APG MD
5 ASST COMDT ARMY AIR DEF SCH FT BLISS ATTN CLASSF TECH LIB
3 CG USA FLD ARTY CTR & FT SILL ATTN AVN OFCR
1 COMDT DEF INTELL SCH ATTN SIGAS DEPT
1 COMDT ARMED FORCES STAFF COLL NORFOLK
1 COMDT USA SIG CTR & SCH ATTN DOI FT MONMOUTH
1 COMDT JUDGE ADVOCATE GENERALS SCH U OF VA
1 DPTY COMDT USA AVN SCH ELEMENT GA
1 DPTY ASST COMDT USA AVN SCH ELEMENT GA
1 USA AVN SCH ELEMENT OFC OF DIR OF INSTR ATTN EDUC ADV GA
1 EDUC CONSLT ARMY MILIT POLICE SCH FT GORDON
6 COMDT USA ENGR SCH ATTN EDUC ADV SMMRES-EA FT BELVOIR
2 COMDT USA SCH EUROPE ATTN EDUC ADV APO 09172 NY
1 OFC OF DOCTRINE DEV LIT & PLNS USA ARMOR SCH ATTN AHMAAS-DM
1 COMDT ARMY AVN SCH FT RUCKER ATTN EDUC ADV
5 CG USA PREP HELICOPTER CTR/SCH & FT WOLTERS ATTN ATSPH-DOT
1 DEN OF INSTR US MIL ACAD WEST POINT NY
1 DIR OF MILIT INSTR US MILIT ACAD WEST POINT
1 USA INST FOR MIL ASSIST ATTN LTC BLDG 1512 ROOM 8 FT BRAGG
4 USA INST FOR MIL ASSIST ATTN COUNTERINSURGENCY DEPT FT BRAGG
1 COMDT DEF MGT SCH FT BELVOIR
2 COMDT USA MSL & MUN CTR & SCH ATTN CHF OFC OF OPS REDSTONE ARSNL
2 COMDT US WAC SCH US WAC CTR ATTN ADMIN FT MCCLELLAN
2 HQ ABERDEEN PG ATTN TECH LIB
1 CO USA INTELL CTR & SCH ATTN DIR OF ACADEMIC OPS FT HUACHUCA
1 CO USA INTELL CTR & SCH ATTN DIR OF DOC & LIT FT HUACHUCA
1 COMDT USA CGSSC OFC OF CHF OF RESIDENT INSTR FT LEAVENWORTH
1 COMDT USA CA SCH ATTN OFC OF DOCTRINE DEVEL LIT & PLNS FT BRAGG
1 COMDT USA CA SCH ATTN DDE FT BRAGG
1 COMDT USA CA SCH ATTN EDUC ADV FT BRAGG
1 COMDT USA CA SCH ATTN LIB FT BRAGG
1 COMDT USA SCH & TNG CTR ATTN ACOFS G3 ENG DIV FT MCCLELLAN
1 COMDT USA SCH & TNG CTR ATTN ACOFS G3 PLNS & OPS DIV FT MCCLELLAN
10 COMDT USA INST FOR MIL ASSIST ATTN DDE FT BRAGG
1 LIBN USAES FT BENNING
4 COMDT USA FLD ARTY SCH ATTN DOE FT SILL
1 COMDT USA ARTY SCH ATTN EDUC SERVICES DIV FT SILL
1 COMDT USA ARTY SCH ATTN EDUC ADV FT SILL
1 COMDT USA TRANS SCH ATTN DIR OF DOC & LIT FT EUSTIS
1 COMDT USA TRANS SCH ATTN LIB FT EUSTIS
1 USA INST FOR MIL ASST ATTN EDUC ADV FT BRAGG
1 COMDT USA CGSSC ATTN ATSCS-DO (SPWAR)
1 COMDT ARMY QM SCH OFC DIR OF NONRESID ACTVY ATTN TNG MEDIA DIV VA
1 COMDT USA ARTY SCH ATTN LIB FT SILL
1 CG USA SCH & TNG CTR ATTN ACOFS G3 FT GORDON
1 DIR OF GRAD STDY & RSCH ATTN REMAV SCI REP USACGSC
1 COMDT USA AD SCH ATTN AHAAAS-DE-EA FT BLISS
1 COMDT USA AC SCH HIGH ALTITUDE MSL DEPT FT BLISS
2 DIR R&SD + SN OPNS DEPT USAIS FT BENNING
1 LEADERSHIP COM CO OPS DEPT US ARMY INF SCH FT BENNING
1 DIR COMM ELEC USAIS FT BENNING
1 DIR ASW-AIR MOBILITY DEPT USAIS FT BENNING
2 DIR COMPANY TACTICS DEPT USAIS FT BENNING
1 CG USA SIG CTR & SCH ATTN ATSSC-DP-CDS FT MONMOUTH
1 CG USA SIG CTR & SCH ATTN ATSSC-EA FT MONMOUTH
1 SECY OF ARMY, PENTAGON
1 DCS-PERS DA ATTN CHF C+S DIV
1 DIR OF PERS STUDIES & RSCH DCSPER DA WASH DC
1 CO FOREIGN SCI + TECH CTR MUN BLDG
2 ACSFOR DA ATTN CHF TNG DIV WASH DC
1 DIR OF C&R OPS JACS FORCE DEVEL ATTN FOR CM PP
1 CHF OF ENGNRS DA ATTN ENGTE-T
1 CHF OF INFO DA ATTN CHF TI DIV
1 HQ ARMY MAT COMD R+D DRCIR ATTN AMCRD-RC
1 CHF OF PERS OPNS PERS DRCPE DA ATTN DPSC
1 CLIN PSYCHOL CONSLT OFC OF CHF PSYCHIAT & NEURL CONSLT
2 CG ARMY MED R+D COMD ATTN BEHAV SCI RES BR
1 US ARMY BEHAVIOR & SYS RSCH LAB ATTN CRD-AIC ARL VA
1 DPD PERS MGT DEV OFC ATTN MUS SEC (NEW EQUIP) DPDMD
1 PROVOST MARSHAL GEN DA
2 DIR CIVIL AFFAIRS DRCIR DCSOPS
1 OFC RESERVE COMPON DA
2 CG USA SEC AGCY ARL HALL STA ATTN AC OF S GI VA
12 ADMIN DOC ATTN: TCA (HEALY) CAMERON STA ALEX., VA. 22314
1 CO US ARMY MED RES LAB FT KNOX
1 CG ARMY ELECT COMD FT MONMOUTH ATTN AMSEL CB
1 CHF OF R+D DA ATTN CHF TECH + INDSTR LIAISON OFC
1 CG USA ELCT COMD ATTN AMSEL-GG-DD
1 CO USA CDC MED SERV AGCY FT SAM HOUSTON
2 CG ARMY MED R+D COMD ATTN MEDDH-SR
1 USA BEHAVIOR & SYS RSCH LAB ATTN CRD-AIC ARL VA
1 COMDT USA CBT SURVEIL SCH & TNG CTR ATT ED ADV FT HUACHUCA
1 COMDT USA CBT SURVEIL SCH & TNG CTR ATTN DRG DOC & NEW EQUIP AREA
2 TNG & DEVEL DIV DCSPERS
1 COMDT USA CBT SURVEIL SCH & TNG CTR ATTN 1ST CBT TNG BDE AREA
1 CAREER MGT BR ATTN K DETTMANN CAMERON STA ALEX VA
1 USA LIB DIV-PASO ATTN ASGIRS
2 PRES ARMY ARMOR BD FT KNOX
1 PRES ARMY INF BD FT BENNING ATTN FE+SP DIV
2 PRES ARMY AIR DEF BD FT BLISS ATTN MST DIV
1 PRES ARMY MAINT BD FT KNOX
2 PRES ARMY AVN TEST BD FT RUCKER

2 PRES ARMY ARTY HD FT SILL
1 LIB ARMY ABN ELEC & SPEC WAKFARE HD FT BRAGG
1 CG CONARC ATTN COL E M HUDAK ATIT-SA FT MONROE
15 CG CONARC ATTN ATIT-STM FT MONROE
2 CG CONARC ATTN LIB FT MONROE
1 CO ARMY CBT DEVEL COMD MILIT POLICE AGY FT GORDON
1 USA ARCTIC TEST CTR CHF INSTR & TEST METH DIV SEATTLE
1 CHF USA AD HRU FT BLISS
1 CHF USA ARMOR HRU FT KNOX
1 CHF USA AVN HRU FT RUCKER
1 CHF USA INF HRU FT BENNING
1 CHF USA TNG CTR HRU PRES OF MONTEREY
1 CG 2D ARMORED DIV FT HOOD ATTN DIV AVN OFCR
10 CG 4TH ARMORED DIV ATTN OCSOT APO NY 09326
2 CO 194TH ARMORED BDE FT KNOX
5 CO 2D ARMORED CAV REGT APO 09693 NY
1 CO 3D ARMORED CAV REGT FT LEWIS
4 CO 14TH ARMORED CAV REGT ATTN AVN OFCR APO 09140 NY
1 1ST ARMORED DIV HQ & HQ CO FT HOOD ATTN AC OF S G2
10 CO 1ST BN 63RD ARMOR 1ST INF DIV ATTN S3 FT RILEY
8 CO 1ST BN 64TH ARMOR 3RD INF DIV ATTN S3 APO NY 09031
8 CO 2ND BN 68TH ARMOR 8TH INF DIV ATTN S3 APO NY 09034
1 CO COMPANY A 3D BN 32D ARMOR 3D ARMORED DIV APO NY
1 CO 5TH BN 33D ARMOR ATTN S3 FT KNOX
1 CO 3RD BN 68TH ARMOR 8TH INF DIV ATTN S3 APO NY 09028
1 CO 3RD BN 37TH ARMOR 4TH ARMORED DIV ATTN S3 APO NY 09069
2 CALIF NG 40TH ARMORED DIV EOS ANGELES ATTN AC OF SG3
1 55TH COMD HQ DIV ARMY NG JACKSONVILLE FLA
4 CO 150TH AVN BN NJ AIR NG ELIZABETH
1 CG HQ 27TH ARMORED DIV NY AIR NG SYRACUSE
1 TEXAS NG 49TH ARMORED DIV DALLAS
3 CG ARMY ARMOR CTR FT KNOX ATTN G3 ATOKGT
1 CG 3RD INF DIV ATTN ACOFS G3 APO NY 09036
1 CG 7TH INF DIV ATT ACOFS G2 APO SAN FRAN 96208
1 CG 8TH INF DIV ATTN ACOFS G2 APO NY 09112
3 CG 4TH INF DIV (MECH) & FT CARSON ATTN ACOFS G3
1 DA HQS FT CARSON & HQS 4TH INF DIV (MECH) ATT MAJ HARRIS
3 CG 82ND ABN INF DIV ATTN ACOFS G3 FT BRAGG
1 CG XVIII ABN CORPS ATTN ACOFS G3 FT BRAGG
1 CO 147TH INF BRGD FT BENNING ATTN S3
1 CO 1ST BN (REINF) ATTN S3 FT MYER
1 CO HDQTRS 2ND BN 6TH US INF REGT ATTN S3 APO NY 09742
7 CO 3RD BN 6TH INF REGT ATTN S3 APO NY 09742
1 CO 171ST INF BDE ATTN S3 APO SEATTLE 98731
1 CO 1ST BN 39TH INF 8TH INF DIV ATTN S3 APO NY 09034
1 CO 2ND BN 15TH INF 3RD INF DIV ATTN S3 APO NY 09026
5 CG 1ST INF DIV ATTN ACOFS G3 FT RILEY
5 CO 1ST BN (MECH) 52ND INF 198TH INF BDE ATTN S3 APO SAN FRAN 96217
1 CO 4TH BN (MECH) 54TH INF ATTN S3 FT KNOX
1 CO USA PARTIC GP USA TNG DEVICE CTR FLA
2 CONSOL RES GP 7TH PSYOP GP APO 96248 SAN FRAN
2 DA OFC OF ASST CHF OF STAFF FOR CUMM-ELECT ATTN CCES-6 WASH
1 CHF MED RES PROJ ARMY MOSP US MILIT ACAD WEST POINT
1 CG MILIT DIST OF WASHINGTON
2 DA USA ADV GP (ARNGUS) RALEIGH NC
1 US DOC OFCR OFC OF THE USNMR SHAPE NY NY 09055
1 USA RECRUITING COMD HAMPTON VA
1 SYS RES GP ENGNR EXPRM STA COLUMBUS O
1 DIR ARMY LIB PENTAGON
1 STRATEGIC PLANNING GP CORPS OF ENGRS ARMY MAP SERV
1 CHF OF MILIT HIST DA ATTN GEN REF BR
1 CO USA 10TH SPEC FORCES GP FT DEVENS
1 CO 24TH ARTY GP (AD) ATTN S3 RI
1 CG 31ST ARTY BDE AD ATTN S3 PA
1 CO 49TH ARTY GP AD ATTN S3 FT LAWTON
2 HQS 4TH BN 59TH ARTY REGT ATTN S3 NORFOLK
1 CO 28TH ARTY GP AD ATTN S3 SELFRIDGE AFB
1 HQ NIAGARA-BUFFALO DEF 31ST ARTY BRGD AIR DEF LOCKPORT
1 HQS 45TH ARTY BDE AD ATTN S3 ARL HTS ILL
1 CO 35TH ARTY BDE AD ATTN S3 FT MEADE MD
1 CG 101ST ABN DIV (AIRMOBILE) ATTN ACOFS G3 APO SAN FRAN 96383
1 CG 1ST CAV (AIRMOBILE) ATTN ACOFS S3 APO SAN FRAN 96383
1 US ARMY GEN EQUIP ATTN TECH LIB FT LEE
2 CO 357TH CA AREA HQ & ARMY BASE ATTN ACTG PUR LAW OFCR 33STDN
1 US ARMY TROPIC TEST CTR PO DRAWER 942 ATTN REMAY SCIEN CZ
2 CO ARMY RES OFC DURHAM
1 CO 525TH MIL INTELL GP ATTN S3 APO SAN FRAN 96307
1 CO USAFAAC ATTN S3 FT SILL
10 CG III CORPS & FT HOOD ATTN G3 SEC FT HOOD
30 CO 1ST ARMORED DIV ATTN G3 SEC FT HOOD
30 CG 2D ARMORED DIV ATTN G3 SEC FT HOOD
25 CO 13TH SUPT BGDE ATTN S3 SEC FT HOOD
1 CG USAFAC & FT SILL ATTN AKPSIGT-ENTN
20 CO III CORPS ARTY ATTN G3 SEC FT SILL
15 CO 1ST AIT BGDE ATTN G3 SEC FT BLISS
8 CG USATCI & FT POLK ATTN AKPPG-JCDT
1 RSCH CONTRACTS & GRANTS BR ARO
1 BESD ARO OFC CHF OF RED WASH DC
1 CHF OF R&D DA ATTN SCI INFO BR RSCH SPT DIV WASH DC
1 LIFE SCI DIV ARO ARL VA
1 CO HQS BN USAFAC & FT SILL ATTN S3
4 CO III CORPS ARTY ATTN S3 FORT SILL
1 CO USRAH ATTN S3 FT SILL
1 CG USAFACFS ATTN AKPSIAG-AS FT SILL
1 EACH PROF OF MILITARY SCI USA ROTC
1 CINC US ATLANTIC FLT CODE 312A USN BASE NORFOLK
1 CINC PACIFIC SCIEN ADV GP (USOS) BOX 14 FPO 96610
1 COR TNG COMMAND US PACIFIC FLT SAN DIEGO
1 CHF BUR OF MED & SURG ON ATTN CODE 513
1 CHF RES DIV BUR OF MED & SURG ON
1 HEAD CLIN PSYCHOL SECT PROFESNL DIV BUR OF MED & SURG DV
5 TECH LIB PERS 11H BUR OF NAV PERS ARL ANNEX
3 DIR PERS RES DIV BUR OF NAV PERS
1 TECH LIB BUR OF SHIPS CODE 210L NAVY DEPT
1 BUR OF YDS & DKS ON ATTN ASST CHF FOR RES DEVEL TEST & EVAL
2 NAV AIR SYS COMD REP ATLANTIC NAV AIR STA NORFOLK
1 ENGNR PSYCHOL BR ONR CODE 455 ATTN ASST HEAD WASH DC
3 CO & DIR NAV TNG DEVICE CTR ORLANDO ATTN TECH LIB
1 CO FLT ANTI-AIR WARFARE TNG SAN DIEGO
1 CO NUCLEAR WPNS TNG CTR PACIFIC US NAV AIR STA SAN DIEGO
1 CO NAV AIR DEVEL CTR JOHNSVILLE PENNA ATTN NADC LIB
2 US FLT AAW TNG CTR DAM NECK VA
2 CO FLT TNG CTR NAV BASE NEWPORT
1 COR FLT TNG OP NAV BASE CHARLESTON
2 CO US FLT TNG CTR NORFOLK
1 CO FLEET TNG CTR US NAV STA SAN DIEGO
1 CLIN PSYCHOL MENTAL HYGIENE UNIT US NAV ACAD ANNAPOLIS
1 PRES NAV WAR COLL NEWPORT ATTN MAHAN LIB
3 CO SERV SCH COMD NAV TNG CTR SAN DIEGO
3 CO NAV GUIDED MSL SCH DAM NECK VA BEACH
2 CO & DIR US ATLANTIC FLT ASW TACTICAL NORFOLK
1 CO NUCLEAR WEAPONS TNG CTR ATLANTIC NAV AIR STA NORFOLK
2 CO FLT SONAR SCH KEY WEST
1 CO FLT ANTI-SUB WARFARE SCH SAN DIEGO
1 CHF OF NAVL RSCH PERS & TNG BR (CODE 458) ARL VA
1 CHF OF NAV RES ATTN DIR PSYCHOL SCI DIV CODE 450
1 CHF OF NAV RES ATTN HEAD OP PSYCHOL BR CODE 452
1 DIR US NAV RES LAB ATTN CODE 5120
1 DIR NAVAL RSCH LAB ATTN LIB CODE 2029 WASH DC
1 CHF OF NAV AIR TNG RES DEPT NAV AIR STA PENSACOLA
1 CO NAV SCH OF AVN MED NAV AVN MED CTR PENSACOLA
1 LIB NAV MED RES LAB NAV SUB BASE GROTON
1 CO MED FLD RES LAB CAMP LEJEUNE
1 COR NAV MSL CTR POINT MUGU CALIF ATTN TECH LIB CODE 3022
1 DIR AEROSPACE CREW EQUIP LAB NAV STA ENGNR CTR PA
1 CO & DIR NAV ELEC LAB SAN DIEGO ATTN LIB
3 OIC NAV PERS RES ACTVY SAN DIEGO
1 NAV NEUROPSYCHIAT RES UNIT SAN DIEGO
2 NAVAL MSL CTR (CODE 5342) PT MUGU CALIF
1 DIR PERS RES LAB NAV PERS PROGRAM SUPPORT ACTIVITY WASH NAV YD
1 NAV TNG PERS CTR NAV STA NAV YD ANNEX CODE 83 ATTN LIB WASH
5 COMDT MARINE CORPS HQ MARINE CORPS ATTN CODE AO-1B
1 HQ MARINE CORPS ATTN AX
1 DIR MARINE CORPS EDUC CTR MARINE CORPS SCH QUANTICO
1 DIR MARINE CORPS INST ATTN EVAL UNIT
1 CG (G5) III MARINE AMPHIBIOUS FORCE MAC FPO SAN FRAN 96602
1 US MARINE CORPS HQS WEST REF LIB ATTN MRS JADOT
1 CHF OF NAV OPNS OP-01P1
1 CHF OF NAVL OPS OP-039 WASH DC
1 CHF OF NAV OPNS OP-07T1
2 COMDT HQS 8TH NAV DIST ATTN EDUC SOV NEW ORLEANS
1 CHF OF NAV AIR TECH TNG NAV AIR STA MEMPHIS
1 DIR OPS EVAL GRP OFF OF CHF OF NAV OPS OP-33EG
2 COMDT PTP COAST GUARD HQ
1 CHF OFCR PERS RES & REVIEW BR COAST GUARD HQ
1 CG US COAST GUARD TNG CTR GOVERNORS ISLAND NY
1 CG US COAST GUARD TNG CTR CAPE MAY NJ
1 CO US COAST GUARD TNG CTR & SUP CTR ALAMEDA CALIF
1 CO US COAST GUARD INST OKLA CITY OKLA
1 CO US COAST GUARD RES TNG CTR YORKTOWN VA
1 SUPT US COAST GUARD ACAD NEW LONDON CONN
1 OPNS ANLS OFC HQ STRATEGIC AIR COMD OFFUTT AFB
1 CINC STRATEGIC AIR COMD OFFUTT AFB ATTN SUP-1
1 AIR TNG COMD/XPT RANDOLPH AFB
1 HQ AIR TNG COMD ATTES RANDOLPH AFB
1 TECH DIR TECH TNG DIV(HRD) AFHRL (LOWRY AFB COLO
1 DEPT OF THE AF HQS USAF ATTN AFCIN-3D1 PENTAGON
1 CHF SCI DIV ORCTE SCI & TECH DCS R&D HQ AIR FORCE AFRSTA
1 FAA ORCTE OF PLNS & OPS HQ USAF WASH DC
1 CHF OF PERS RES BR ORCTE OF CIVILIAN PERS DCS-PERS HQ AIR FORCE
1 CHF ANAL DIV (AFPDPL (R)) DIR OF PERSONNEL PLANNING HQS USAF
2 OPTY TIG USAF (AFIAS-CI) NORTON AFB
1 RADC RASH GRIFFISS AFB NY
2 CDR ELEC SYS DIV EG HANSCOM FLD ATTN ESMDA/STOP 30 MASS
2 SMAMA (SMACU-PERS RSCH) MCCLELLAN AFB
1 ATC AFRRQ RANDOLPH AFB
1 AFHRL/TT ATTN CAPT W S SELLMAN LOWRY AFB
1 HQ SAMSO (SMSER) AF UNIT POST OFC LA AFS CALIF
2 MILIT TNG CTR OPE LACKLAND AFB
2 AFHRL (HRTI) WRIGHT-PATTERSON AFB
1 AMD AMRH BROOKS AFB TEXAS
1 HQS ATC DCS/TECH TNG (ATTMS) RANDOLPH AFB
1 CDR ELEC SYS DIV EG HANSCOM FLD ATTN ESTI MASS
1 USAF SCH OF AEROSPACE MED ATTN AEROMED LIB BROOKS AFB
1 USAFA DIR OF THE LIB USAF ACAD COLO
1 DRCTE OF AEROSPACE SAFETY AFIAS-L OPTY IG NORTON AFB
1 6570TH PERS RES LAB PRA-4 AEROSPACE MED DIV LACKLAND AFB
1 TECH TNG CTR (LMTC/OP-1-LIB) LOWRY AFB
2 CO HUMAN RESOURCES LAB BROOKS AFB
1 COMDT USAF SPEC OP SCH ETACS EGLIN AFB
1 AFHRL (FT) WILLIAMS AFB ARIZ
1 PSYCHOBIOLOGY PROG NATL SCI FOUND
1 DIR NATL SCI FOUNDN WASHINGTON ATTN ASST DIR FOR SOC SCI
1 DIR NATL SECUR AGY FT GEC G MEADE ATTN T3L
1 DIR NATL SECUR AGY FT GEC G MEADE ATTN DEP OF TNG
3 CIA ATTN CRS/ADD STANDARD DIST
1 SYS EVAL DIV RES DIRECTORATE DDG-HCD PENTAGON
1 DEPT OF STATE BUR OF INTEL & RES EXTERNAL RES STAFF
3 US INFO AGY INT L PROCUREMENT LIB
1 SCI INFO EXCH WASHINGTON
2 CHF MGT & GEN TNG DIV TR 200 FAA WASH DC
1 BUR OF RES & ENGR US POST OFC DEPT ATTN CHF HUMAN FACTORS BR
1 EDUC MEDIA BR OE NEW ATTN T O CLEMENS
1 OFC OF INTERNATL TNG PLANNING & EVAL HR AID WASH DC
1 FAA MED LIB HQ 640 WASH DC
1 DEPT OF TRANS FAA ACQ SEC HQ 610A WASH DC
2 ERIC DE WASH DC
1 CONSOL FED LAW ENFORCEMENT TNG CTR WASH DC
2 SYS DEVEL CORP SANTA MONICA ATTN LIB
2 DUNLAP & ASSOC INC DARIEN ATTN LIB

2 RAC ATTN LIB MCLEAN VA
1 RAND CORP WASHINGTON ATTN LIB
1 DIR RAND CORP SANTA MONICA ATTN LIB
1 GP EFFECTIVENESS RSCH LAB U OF ILL DEPT OF PSYCHOL
2 ELECT PERS RSCH GP U OF SOUTHERN CALIF
1 COLUMBIA U ELEC RES LABS ATTN TECH EDITOR
1 MITRE CORP BEDFORD MASS ATTN LIB
2 SIMULATION ENGR CORP ATTN DIR OF ENGR FAIRFAX VA
2 LEARNING RSD CTR U OF PITTS ATTN DIR
1 WESTERN ELECTRIC CO INC NY
1 HUMAN SCI RES INC MCLEAN VA
2 TECH INFO CTR ENGNR DATA SERV N AMER AVN INC COLUMBUS O
1 CHRYSLER CORP MSL DIV DETROIT ATTN TECH INFO CTR
1 AVCO CORP AVCO MSL SYS DIV ATTN RSCH LIB WILMINGTON MASS
3 CTR FOR RSCH IN SOCIAL SYS ATTN LIBN MD
1 RAYTHEON SERV CO ATTN LIBN BURLINGTON MASS
1 GEN DYNAMICS POMONA DIV ATTN LIB DIV CALIF
2 OTIS ELEVATOR CO DIV ATTN LIB STAMFORD CONN
1 MGR BIOTECHNOLOGY AEROSPACE SYS DIV MS AH-25 BOEING CO SEATTLE
1 IDA RSCH & ENG SUPT DIV ARL VA
1 SCI & TECH DIV IDA ARL VA
1 HUGHES AIRCRAFT COMPANY CULVER CITY CALIF
2 BATTELLE MEMORIAL INST COLUMBUS LABS ATTN RACIC OHIO
1 DIR CTR FOR RES ON LEARNING + TEACHING U OF MICH
1 R M STOGDILL OHIO STATE UNIV
1 EDITOR TNG RES ABSTR AMER SOC OF TNG DIRS U OF TENN
1 U OF CHICAGO DEPT OF SOC
1 HUMAN FACTORS SECT H+D GEN DYNAMICS ELECTRIC BOAT GROTON
1 DIR CTR FOR RSCH IN SOCIAL SYS KENSINGTON MD
3 CANADIAN JOINT STAFF OFC OF DEF RES MEMBER WASHINGTON
3 CANADIAN ARMY STAFF WASHINGTON ATTN G502 TNG
2 CANADIAN LIAISON OFCR ARMY ARMOR BD FT KNOX
1 GERMAN LIAISON OFCR ARMY AVN TEST BD FT RUCKER
2 OFC OF ARMED FORCES ATTACHE ROYAL SWEDISH EMBSY DC
3 AUSTRALIAN NAV ATTACHE EMBSY OF AUSTRALIA WASH DC
2 FRENCH ARMY LIAISON OFCR USAAVNC & FT RUCKER
1 BRITISH LIAISON OFCR ARMY AVN TEST BD FT RUCKER
1 OFC OF AIR ATTACHE AUSTRALIAN EMBSY ATTN: T.A. NAVGN WASH, D.C.
2 AUSTRALIAN ARMY ATTACHE EMBSY OF AUSTRALIA ATTN TECH CLK
2 DR B T DODD LRNING SYS LTD SURREY ENGLAND
1 MENNINGER FOUNDATION TOPEKA
1 AMER INSTS FOR RSCH SILVER SPRING
1 AMER INSTS FOR RSCH ATTN LIBN PA
1 DIR PRIMATE LAB UNIV OF WIS MADISON
1 DR E GINZBERG COLUMBIA UNIV SCH OF BUS
3 MATRIX RSCH CO FALLS CHURCH VA
1 EDUC & TNG CONSLT CO LA CALIF
1 OBERLIN COLL DEPT OF PSYCHOL
1 DR GEORGE T HAUTY CHMN DEPT OF PSYCHOL U OF DEL
1 GEN ELECTRIC CO SANTA BARBARA ATTN LIB
1 VITRO LABS SILVER SPRING MD ATTN LIBN
1 HEAD DEPT OF PSYCHOL UNIV OF SC COLUMBIA
1 TVA PERS STAFF OFCR KNOXVILLE TENN
1 U OF GEORGIA DEPT OF PSYCHOL
1 U OF UTAH DEPT OF PSYCHOL
1 GE CO WASH D C
1 AMER INST FOR RSCH ATTN LIB PALO ALTO CALIF
1 COLL OF ARTS & SCI U OF MIAMI ATTN L L MCQUITTY
1 ROWLAND + CO HADDONFIELD NJ ATTN PRES
1 NORTRONICS DIV OF NORTHROP CORP ANAHEIM CALIF
1 OHIO STATE U SCH OF AVN
1 SCI RSCH ASSOC INC DIR OF EVAL CHICAGO ILL
2 AIRCRAFT ARMAMENTS INC COCKEYSVILLE MD

1 DR J B CULLEN DEPT OF SOC & ANTHROP UNIV OF KI
2 OREGON STATE U DEPT OF MILIT SCI ATTN ADJ
1 AMER PSYCHOL ASSOC WASHINGTON ATTN PSYCHOL ABSTR
1 NO ILL U HEAD DEPT OF PSYCHOL
1 GEORGIA INST OF TECH DIR SCH OF PSYCHOL
1 BELL TEL LABS INC TECH INFO LIB NJ
1 ENGNR LIB FAIRCHILD HILLER REPUBLIC AVN DIV FARMINGDALE N Y
1 LIFE SCI INC HURST TEXAS ATTN W G MATHENY
1 AMER BEHAV SCI CALIF
1 PUB ADMIN CTR ATTN J D KITCHEN SAN DIEGO
2 DIR INSTN RESOURCES STATE COLL ST CLOUD MINN
1 COLL OF WM + MARY SCH OF EDUC
1 SO ILLINOIS U DEPT OF PSYCHOL
2 ASSOC DIR COC TNG PROG ATLANTA GA
2 WASH MILITARY SYS TECH LIB DIV BETHESDA MD
1 NORTHWESTERN U DEPT OF INDSTR ENGNR
1 DR L TWYFORD NY STATE EDUC DEPT ABSTRACT EDITOR AVCR
1 AEROSPACE SAFETY DIV U OF SOUTHERN CALIF LA
1 MR BRANDON A SMITH RES ASSOC U OF MINN
1 DR V ZACHERT RT 1 GOOD POPE GA
1 J P LYDON DIR JR ROTC SAN ANTONIO TEXAS
1 DR E FOULKE DEPT OF PSYCH UNIV OF LOUISVILLE
2 CHRYSLER CORP DEF ENGR ATTN DR H BERMAN DETROIT
1 DR S ROSCOE ASSOC DIR FOR RSCH INST OF AVN U OF ILL
1 DR C HELM DEPT EDUC PSYCH CITY U OF NY
1 DR E PERKINS PROF OF PSYCH ST CLOUD STATE COLL MINN
1 GEN H P HARRIS (USA RETIRED) THE CITADEL SC
1 DR H SHOEMAKER DIR TNG RSCH GP NY
1 U OF MINN DEPT OF INDUST EDUC ATTN K E KUHL
1 VOC-TECH EDUC PROG PLNNG DEV ATTN W STUCK ST PAUL
1 CHF PROCESSING DIV DUKE U LIB
1 U OF CALIF GEN LIB DOCU DEPT
1 FLORIDA STATE U LIB GIFTS + EXCH
1 PSYCHOL LIB HARVARD UNIV CAMBRIDGE
1 U OF ILL LIB SER DEPT
2 U OF KANSAS LIB PERIODICAL DEPT
1 U OF NEBRASKA LIBS ACQ DEPT
1 OHIO STATE U LIBS GIFT + EXCH DIV
1 PENNA STATE U PATTEE LIB DOCU DESK
1 PURDUE U LIBS PERIODICALS CHECKING FILES
1 STANFORD U LIBS DOCU LIB
1 LIBN U OF TEXAS
1 SYRACUSE U LIB SER DIV
1 SERIALS REC UNIV OF MINN MINNEAPOLIS
1 STATE U OF IOWA LIBS SER ACQ
1 NO CAROLINA STATE COLL DH HILL LIB
2 BOSTON U LIBS ACQ DIV
1 U OF MICH LIBS SER DIV
1 BROWN U LIB
1 COLUMBIA U LIBS DOCU ACQ
1 DIR JOINT U LIBS NASHVILLE
1 U OF DENVER MARY REED LIB
2 LIB GEO WASH UNIV ATTN SPEC COLL DEPT WASH DC
2 LIB OF CONGRESS CHF OF EXCH + GIFT DIV
1 U OF PGH DOCU LIBN
1 CATHOLIC U LIB EDUC & PSYCHOL LIB WASH DC
1 U OF KY MARGARET I KING LIB
1 SO ILL U ATTN LIBN SER DEPT
1 KANSAS STATE U FARRELL LIB
1 BRIGHAM YOUNG U LIB SER SECT
1 U OF LOUISVILLE LIB BELKNAP CAMPUS
1 GEORGETOWN U LIB SER DEPT WASH DC
1 LIBS COLO STATE U ATTN DCC LIBN FT COLLINS

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